

Chapter 1

PURPOSE AND NEED AND OBJECTIVES

This chapter of the combined Program Environmental Impact Report and Environmental Impact Statement (Program EIR/EIS) describes the need for conventional rail improvements to help relieve the growing capacity and congestion constraints on intercity travel using existing highway and passenger rail infrastructure between Los Angeles, Orange and San Diego Counties. This chapter also describes how incremental improvements would serve the purpose of augmenting the existing rail infrastructure, helping to relieve congestion and capacity constraints, while simultaneously offering reliable, safe and time-efficient travel.

References to the sources used in the preparation of this document are provided in Chapter 11. In some cases to clarify a particular source, specific references are called out in the text.

1.1 INTRODUCTION

The Los Angeles to San Diego travel corridor links California's three most populous counties - Los Angeles, Orange and San Diego. Travel along this corridor is served largely by Interstate 5 (I-5) and the intercity and commuter rail services that operate along the former Santa Fe Railroad corridor between Los Angeles and San Diego. This rail corridor is currently used by Amtrak, Metrolink, Coaster and the Burlington Northern and Santa Fe Railway (BNSF) freight service, and loosely parallels I-5 from Los Angeles Union Station through Orange County to San Diego's Santa Fe Depot.

For the purposes of this study, intercity rail service refers to the passenger rail service, operated by Amtrak and jointly funded by Amtrak and the California Department of Transportation (Department) and known as the Pacific Surfliner. The Pacific Surfliner provides daily passenger service along the rail corridor that connects San Diego, Los Angeles, Santa Barbara, and San Luis Obispo (and intermediate communities between these cities), and is more commonly known as the LOSSAN corridor. However, for the purpose of this study the LOSSAN corridor will refer only to the segment between Los Angeles and San Diego. Commuter rail refers to the services provided by Metrolink in Los Angeles, Orange and north San Diego Counties, and Coaster in San Diego County. Since three services regularly utilize the LOSSAN corridor, the expansion plans of each service, and those of BNSF (the freight operator), must be taken into account when considering improvements along the rail corridor.

Southern California's existing transportation network is currently operating at or near its design capacity, and building additional capacity is both expensive and increasingly problematic. This results in highway and railroad travel delays, has a negative impact on the region's economy, and can result in environmental impacts and the reduction of the quality of life for all.

Improvements to the LOSSAN rail corridor would help meet the Southern California region's transportation demands of today, as well as help to address the expected increase in intercity travel demand rising out of the growth in population over the next 20 years and beyond.

Improvements to the LOSSAN rail corridor would improve passenger rail travel between the Los Angeles, Orange and San Diego County major metropolitan areas; provide for a better interface with transit and highways; and provide added capacity within a multimodal strategy to help meet increases in intercity travel demand in Southern California in a manner sensitive to and

protective of California's unique natural resources. The overall goal is to improve mobility and reliability in this congested part of the state by decreasing trip times and improving the rail system in a cost-effective and environmentally sensitive manner.

The Department is partnering with the California High-Speed Rail Authority (Authority) in its examination of the LOSSAN corridor. The Authority is the state agency responsible for the proposed statewide high-speed train system extending from Sacramento, the Bay Area, through the Central Valley to Los Angeles and San Diego. While this electrified, grade-separated system might run only as far south as either Anaheim or Irvine within the general LOSSAN region, the LOSSAN corridor is important to the Authority in its role as a feeder network to the statewide system, and the improvements proposed by the Department would strengthen the corridor's ability to serve that role.¹

The Department and the Authority worked together, within the framework of an Agreement, to develop the technical data and necessary public and agency outreach for the Department's LOSSAN Rail Corridor Improvements Program EIR/EIS. LOSSAN corridor improvements are also considered as a feeder service in the Authority's High-Speed Train Program EIR/EIS, with shared corridor options as far south as Irvine. The Department and the Authority are responsible for making their own decisions, analyses, and determinations regarding the use of the shared technical data. (See Chapter 2, Alternatives, for more discussion of the relationship between the Authority and the Department in developing and evaluating options for rail improvements in the LOSSAN region.)

The Department commenced this environmental review process to comply with federal and state laws, in particular the National Environmental Policy Act of 1969 (NEPA) (42 U.S.C. § 4321 et seq.) and the California Environmental Quality Act (CEQA) (Cal. P.R.C. § 21000 et seq.). NEPA requires federal agencies to prepare an environmental impact statement (EIS) for proposed actions that have the potential to cause significant environmental impacts. Because of possible future funding and regulatory action, the Federal Railroad Administration (FRA) is the lead federal agency, working with the Department as the lead state agency, for the environmental review required by NEPA and related statutes. The FRA has further determined that the preparation of a program-level (tier 1) EIS for the proposed rail improvements is the appropriate NEPA document because of the comprehensive nature and scope of the corridor improvements proposed by the Department and the conceptual stage of planning and decision-making. The decisions related to advancing and ultimately constructing the proposed rail improvements would constitute major federal actions requiring environmental review under NEPA for several federal agencies in addition to the FRA. The U.S. Environmental Protection Agency (EPA), U.S. Army Corps of Engineers (USACE), and the U.S. Fish and Wildlife Service (USFWS), among others, have been active participants throughout project planning and the preparation of this Program EIS.

The rail corridor improvements being proposed are subject to environmental review under CEQA, and the Department is both the project sponsor and the lead agency for purposes of CEQA compliance. The Department has determined that a program environmental impact report (EIR) is the appropriate CEQA document for the project at this conceptual stage of planning and decision-making, which includes selecting a preferred rail alignment option in some locations and identifying options for phasing the development of the incremental rail improvements. No permits will be sought in this phase of environmental review. If the rail

¹ As part of its proposed statewide high-speed train system, the Authority is also continuing to examine a dedicated high-speed train corridor between Los Angeles and San Diego via the Inland Empire (Riverside and San Bernardino).

improvements alternative is selected at the conclusion of the Program EIR/EIS, project development will continue with project-specific environmental documentation to assess in more detail the impacts of reasonable and feasible alignment and station options in segments of the system that are ready for implementation. Project-specific environmental documentation will also update environmental/regulatory settings as necessary and include the future forecasting to 20 years from time of estimated completion of construction of the specific project.

This document is being prepared as a combined program EIR/EIS for compliance with both CEQA and NEPA. The Program EIR/EIS will enable public agencies to evaluate the potential impacts of the proposed rail improvements, evaluate the improvements against the No Project/No Action Alternative, select a preferred alternative, and define mitigation strategies to address any potentially significant adverse impacts. If the Rail Improvements Alternative is selected as the preferred alternative, the Program EIR/EIS will support the approvals and initial financing decisions necessary to implement the proposed rail corridor improvements.

Preparation of a program-level document followed by more detailed project-specific documents that “tier”² off the program document offers a number of advantages. As described in Council on Environmental Quality (CEQ) regulations (40 C.F.R. §1508.28), FHWA Guidelines (23 C.F.R. Part 771; 52 F.R. § 32646 [August 1987]), and the state CEQA Guidelines (14 C.C.R. § 15168[b]), this approach offers the following advantages.

- More exhaustive consideration of impacts and alternatives than would be practical in an individual or project-specific EIR/EIS.
- Consideration of cumulative impacts that might be slighted in a case-by-case analysis.
- An opportunity for decision-makers to consider broad policy alternatives and program-level mitigation strategies at an early stage, when the flexibility to incorporate them is greater.
- Avoiding reconsideration of policy issues in subsequent documents.
- Early coordination with the USACE and EPA to identify avoidance and minimization opportunities that are likely to yield or will lead to the selection of a least environmentally damaging practicable alternative (LEDPA) under Section 404 of the Clean Water Act.
- Less paperwork by encouraging the reuse of data through incorporation by reference in subsequent tiered documents.

The required contents of a program EIR/EIS are the same as those of a project-level document. However, the level of detail provided in the two types of documents differs substantially because a program-level document analyzes a general conceptual design of the proposed program and alternatives rather than providing detailed analysis of a specific project proposal.

A program EIR/EIS is an informational document intended to analyze and to disclose to the public and to public decision-makers the environmental effects and benefits of a proposed program and its alternatives. The preparation, circulation, and review of a draft program EIR/EIS provides for the evaluation of alternatives, including a no-project/no-action alternative; the assessment of all significant environmental impacts; and the opportunity for public input and

² Tiering refers to a multilevel approach where a first tier environmental document analyzes general matters and subsequent tiers analyze narrower projects/actions, referencing the more general document.

comments to help inform the decision-making process. Evaluating alternatives as required by FRA's procedures for considering environmental impacts (64 F.R. § 28545 [May 26, 1999]) and by other federal agency NEPA regulations and state CEQA guidelines helps ensure that avoidance and minimization of potential environmental impacts are addressed, and potential benefits, costs, and trade-offs of alternatives are considered.

This Program EIR/EIS has been prepared under the supervision and direction of the FRA and the Department and with input from federal, state and local agencies. It is intended that other federal, state, regional, and local agencies use the Program EIR/EIS to review the proposed program and develop expectations for the project-level (tier 2) environmental reviews that would follow should the Rail Improvements Alternative be selected.

1.2 PURPOSE OF AND NEED FOR IMPROVED INTERCITY TRANSPORTATION IN SOUTHERN CALIFORNIA

Purpose and need are closely linked but subtly different. Need may be thought of as the problem and purpose as an intention to address the problem. Purpose describes why the sponsoring agency is proposing an action that may have environmental impacts and provides the basis for selecting reasonable and practicable alternatives for consideration, comparing the alternatives, and selecting the preferred alternative (40 C.F.R. § 1502.13; ["The statement shall briefly specify the underlying purpose and need to which the agency is responding in proposing the alternatives including the proposed action"]; see also NEPA § 102.). CEQA requires that an EIR identify the project sponsor's objectives which are similar to the purpose required by NEPA (CEQA Guidelines, C.C.R. Title 14, § 15124 [b]). The objectives provide benchmarks for selecting a reasonable range of alternatives for analysis, as required by CEQA.

1.2.1 Purpose Of Rail Improvements

The purpose of the proposed rail improvements to the LOSSAN corridor is to develop a faster, safer and more reliable passenger rail system that provides added capacity in response to increased travel demand (through the year 2020) between Los Angeles, Orange and San Diego Counties (between Los Angeles Union Station and San Diego Santa Fe Depot).

In the current California State Rail Plan (covering the period from 2001-02 to 2010-11), the Department has described its overall objectives and policies for intercity rail improvements. These objectives and policies include the following.

- Increase the cost-effectiveness of State-supported intercity passenger rail systems.
- Increase capacity on existing routes.
- Reduce running times to attract additional riders and to provide a more attractive service.
- Improve the safety of State-supported intercity rail service.

In addition to the policies set forth in the State Rail Plan, minimizing impacts to natural resources (e.g. wetlands, wildlife habitat) and human communities are also important objectives of the Department regarding any improvement within the rail corridor.

The regional Metropolitan Planning Organizations (MPOs), which include the Southern California Association of Governments (SCAG) and the San Diego Association of Governments

(SANDAG), state in their Regional Transportation Plans (RTPs) a desire for rail improvements within their jurisdictions as part of a balanced, multimodal transportation system, and a willingness to cooperate with the Department in the development of this Program EIR/EIS. Both SCAG and SANDAG regard rail improvements as an integral component in improving the regional transportation system.

The SCAG RTP states that Metrolink, the regional commuter rail service, has developed a \$1.1 billion long-range capital improvements plan, which will effectively double Metrolink's passenger capacity. Projects within this long-range plan include the following.

- Selective double-tracking on critical route segments.
- Switching and signaling improvements.
- Communication system improvements.
- New stations and improvements to existing stations.
- Additional rolling stock and maintenance facilities.

In addition, the SANDAG RTP identifies actions supportive of the purpose including improvements of the existing commuter and intercity rail service. Examples of the improvements cited in the SANDAG RTP include the following.

- Complete double-tracking from Oceanside to San Diego (conditional on appropriate environmental impact analyses).
- Tunnels at Del Mar and University Towne Centre.
- Grade separations (where practical).
- New stations and expansion of parking at existing stations.

These proposed corridor improvements could also help provide those who don't own or operate an automobile (including minors, seniors, and disabled persons) with improved transportation choices.

The Department's proposed rail improvements are consistent with recent expressions of federal transportation policy, most notably the Transportation Equity Act for the 21st Century (TEA-21) (105 Pub. L. 178; 112 Stat. 107 [1998]) and its predecessor, the Intermodal Surface Transportation Efficiency Act (ISTEA) (102 Pub. L. 240; 105 Stat. 1914 [1991]), which encourage public transportation investment that increases national productivity and domestic and international competition while improving safety and social and environmental conditions. Specifically, these policies encourage investments that offer benefits such as those listed below.

- Link all major forms of transportation.
- Improve public transportation systems and services.
- Enhance efficient operation of transportation facilities and service.

Together, these statements of policy support the purpose of the improvements being studied within the LOSSAN corridor. The following sections describe the need, or problems underpinning the purpose.

1.2.2 Need For Rail Improvements in the LOSSAN Corridor

The capacity of Southern California's intercity transportation system is insufficient to meet existing and future demand, and the current and projected future congestion of the system will continue to result in deteriorating air quality, reduced reliability, and increased travel times. The intercity rail system has not kept pace with the tremendous increase in population and tourism in the state. The interstate highway system, commercial airports, and conventional passenger rail system serving the intercity travel market are currently operating at or near capacity and will require large public investments for maintenance and expansion in order to meet existing demand and future growth over the next 20 years and beyond. Simply stated, the need for improvements to the corridor relates to the following issues.

- Future growth in travel demand for passenger trips between Los Angeles, Orange and San Diego Counties.
- Rail capacity constraints that will result in congestion and travel delays.
- Unreliability of travel stemming from congestion and delays, weather conditions, accidents and other factors that affect the quality of life and economic well-being of residents, businesses, and tourism in Southern California.
- Increasing frequency of accidents on intercity highways and passenger rail lines in California's congested travel corridors, and the potential for accidents at at-grade crossings as highway and rail traffic volumes increase.
- Poor and deteriorating air quality and pressure on natural resources as a result of expanded highway construction, motor vehicle use and congestion

The following sections provide additional information on these factors, emphasizing the transportation constraints and capacity limitations relevant to intercity travel in Southern California.

A. TRAVEL DEMAND

Although the primary focus of this study is the improvement of the intercity passenger rail system, the total rail travel demand along the LOSSAN corridor is the result of the combination of the intercity, commuter and freight services. The demand for each service is described in the following sections, followed by a summary of the overall existing and proposed capacity of the rail corridor.

Intercity Trips

Intercity travel in California is projected to grow by 35 percent over the next 20 years, from 155 million trips to 209 million trips. For Southern California, defined here as the Counties of Los Angeles, Orange and San Diego, intercity travel is expected to grow by approximately 23.4 percent over a 23-year time span, from 36 million trips in 1997, to approximately 47 million in 2020.³ Between the years 2000 and 2020, the state's population is expected to increase by 31 percent, from 34.7 million to 45.4 million residents. Southern California's share of the population increase over the same period is forecast to be 3.4 million (or 23 percent), as shown in Figure 1.2-1. By 2020, just under half of the total statewide population will live in Southern California.

³ Charles River Associates Incorporated, *Independent Ridership and Passenger Revenue Projections for High Speed Rail Alternatives in California*, January 2000.

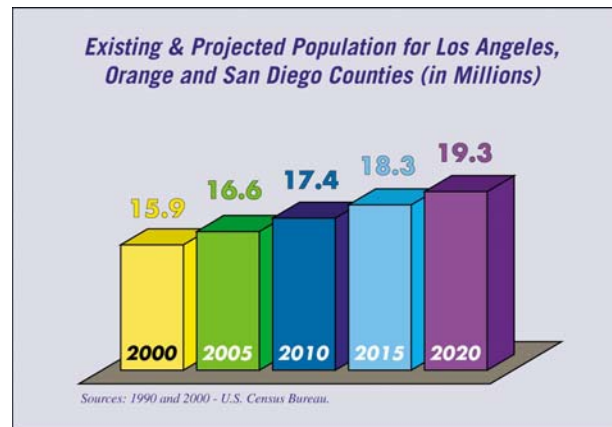


Figure 1.2-1. Projected population growth for Southern California

Statewide, automobile trips account for over 84 percent of all intercity travel and over 58 percent of the longer trips. In Southern California, this is even more pronounced, as the automobile currently dominates intercity travel. Table 1.2-1 shows the expected growth in traffic volume on the major highway link between Los Angeles and San Diego from 2000 to 2025. Automobile travel between Los Angeles and San Diego is currently the second largest geographic travel market in the state, accounting for 34.9 million trips in 1997.

**Table 1.2-1.
Average Daily Traffic Volumes between Los Angeles and San Diego**

Major Highway	Avg. Daily Volume 2001	Avg. Daily Volume 2025	% Change 2001 - 2025
I-5 between Downtown Los Angeles and Downtown San Diego	221,900	270,193	18%

Sources: The Department, Orange County Transportation Authority, SCAG, SANDAG

Currently, this intercity corridor is also the second busiest intercity rail corridor in the nation, carrying approximately 4,700 riders each day (1.7 million riders annually) along the entire Pacific Surfliner corridor from San Luis Obispo to San Diego (California Department of Transportation 2001). Of this service, the segment between Los Angeles and San Diego has a current daily ridership of 3,900 (1.4 million riders annually). Intercity rail travel is anticipating exponential growth within the next 20 years. In 2001, Amtrak's 20-Year Improvement Plan projected 2005 and 2020 ridership along the rail corridor from San Luis Obispo to San Diego, using the total travel demand growth and constant mode share. By 2005, ridership is forecast to increase to approximately 5,500 riders per day (2 million riders annually) and to 15,800 daily riders (5.77 million riders annually) by 2020.

Regional and urban traffic is steadily increasing. This affects intercity travel by delaying travelers at specific highway chokepoints, therefore increasing congestion along the entire corridor. The proposed rail corridor improvements would help to accommodate a portion of this projected growth in travel demand.

Commuter Rail Trips

Commuter service is one of three services that currently use the rail corridor between Los Angeles and San Diego. Commuter services within the corridor are operated by

two transportation agencies. The Southern California Regional Rail Authority (Metrolink) operates commuter rail services within Los Angeles and Orange County, while North County Transit District (Coaster) operates commuter service within San Diego County.

Currently, a total of 14 trains each weekday are operated by Metrolink in each direction between Los Angeles Union Station and the Fullerton Transportation Center in North Orange County, 15 to 16 trains operate in each direction between the Fullerton Transportation Center and the Irvine Transportation Center, roughly 9 to 10 operate in each direction along the rail corridor between Irvine and San Juan Capistrano, and 6 trains currently operate in each direction as far south as Oceanside in North San Diego County. Headways vary between one-half hour to three hours, depending on the direction of operation, time of day, and the segment of the corridor in which the train is operating.

The Coaster operates 11 trains a day in each direction between the Oceanside Transportation Center and the Santa Fe Depot in downtown San Diego, at headways similar to those of Metrolink, with an additional 4 trains in each direction are operated on Friday's. Currently, 4 trains operate in each direction every Saturday with headways of approximately 2 to 3 hours in each direction.

By 2020, service is expected to increase in Los Angeles and Orange Counties to 28 trains in each direction every weekday between Union Station and the Irvine Transportation Center in central Orange County, and 17 trains every weekday between Irvine and the Laguna Niguel Transportation Center in South Orange County. Service between Laguna Niguel and San Juan Capistrano is expected to increase to 11 trains every weekday in each direction and service south of San Juan Capistrano is projected to increase to roughly 8 to 9 trains in each direction. No weekend service is currently planned.

Coaster commuter operations are expected to increase by 2020 to 28 trains in each direction each weekday between Oceanside and San Diego with an expected increase in weekend service as well.

Rail Freight Movements

The LOSSAN corridor from Los Angeles to Fullerton is owned and operated by the Burlington Northern and Santa Fe (BNSF) Railway and is their primary intercontinental corridor from the Ports of Los Angeles and Long Beach to all of North America. Currently, there are 45 trains within a 24-hour period that travel along this segment of the corridor. That number is projected to increase to approximately 99 trains by the year 2020. The majority of these trains continue east past Fullerton towards the Inland Empire.

The BNSF is the only rail freight operator between San Diego and Los Angeles. Currently, BNSF has no active customers between Del Mar and Oceanside. In North San Diego County, the only regular customer serviced by the BNSF is the Marine Corps Base at Camp Pendleton. According to BNSF, on average 6 to 8 freight trains currently travel between San Diego and Los Angeles within a 24-hour time period. Freight service within this corridor is focused in the following three areas:

- Auto Transload Service in San Diego
- Lumber, Fly Ash, and Cement
- Local Freight Service (Service to Escondido and Miramar)

Future service along the corridor segment from Fullerton to San Diego is not expected to increase beyond 9 to 12 trains within a 24-hour time period, regardless of improvements along the existing rail corridor, according to recent forecasts developed by the Los Angeles Economic Development Council.

B. CAPACITY OF THE INTERCITY TRANSPORTATION SYSTEM

Figure 1.2-2 illustrates the major roads, rail routes and airports currently being utilized for intercity travel within the Southern California region. The growing population and economic activity in Southern California has placed severe demands on the already congested transportation system serving the area. Many of the highways and airports are currently operating at capacity and current plans for expansion will not keep up with projected growth over the next 20 years. Figure 1.2-3 shows the existing and future train volumes along the Los Angeles to San Diego rail corridor.

The three rail services along the LOSSAN corridor are constrained by a corridor that is significantly undersized for the volumes of traffic it accommodates. Currently, 41 percent of the 127.5-mile rail corridor consists of a single track. The extensive sections of single-track greatly constrain the movements of trains through the corridor. By necessity, only a single train at a time can be present along any one stretch of single-track, causing other trains to stack at either end of the single-track section, resulting in delays, and reducing the attractiveness of rail as a travel mode choice.

The proposed improvements to the existing LOSSAN corridor would allow for a more reliable, safe, and competitive intercity travel option. This more balanced transportation system would relieve some of the projected near- and long-term demand on the existing transportation infrastructure, potentially slowing the need to further expand highways and airports, or reduce the scale of those expansions, reducing their associated cost, community impacts and environmental impacts. The LOSSAN corridor rail improvements would augment the highway system, creating an interconnected, multimodal solution, allowing for better mobility throughout Southern California.

C. TRAVEL TIME

Among the most important factors that impact the public's choice of transportation modes are travel time and reliability. Travel time is the time spent on the road, in the air, or on a train from a place of origin to a place of destination. Travel time is an important economic factor for business travel, as delays can affect worker productivity and planned business activities. Table 1.2-2 shows the approximate point-to-point travel time in 2000, which includes congestion effects, and the projected total travel time in 2020 for autos, compared with the existing and projected station to station travel time for Amtrak's Pacific Surfliner, based on information collected from Amtrak and the Regional Transportation Planning Agencies (RTPAs).

Table 1.2-2.
Present and Future Travel Times between
Los Angeles and San Diego during Peak Period

Route	Auto 2000	Auto 2020	Rail 2000	Proposed LOSSAN Goal
Downtown Los Angeles to Downtown San Diego	2:35	3:15	2:44	< 2:00

Source: California High Speed Rail Authority

Table 1.2-2 shows that point-to-point travel times during peak period by rail and auto are comparable today, and that rail will be faster in the future because auto travel is projected to slow with increasing congestion. However, total travel time for rail includes time required to reach a station, time spent waiting for the next scheduled train, time spent getting to the boarding area, time spent checking or retrieving luggage, time spent getting a rental car or taxi, and time spent to reach the final destination. If rail is to be a viable alternative to the automobile, it must provide point-to-point times significantly better than the automobile, since rail cannot provide door-to-door service. (The lack of door-to-door service is partially offset by the advantage that rail destinations are usually located in the heart of a community, and close cooperation with local transit agencies can improve connecting travel to the final destination.)

Intercity rail trip delays are mainly related to shared-track conflicts with commuter and freight trains. The proposed LOSSAN corridor improvements will reduce travel time over the next twenty years by increasing operating speeds and efficiency, while simultaneously enhancing grade crossing safety, and lessening environmental degradation. These improvements would benefit all rail services, including freight, intercity and commuter trains, passengers, automobile drivers, and the communities in which the improvements are located. The proposed rail improvements would help ensure the efficient transport of goods and freight, a critical component of the state's economic health. Consequently, the proposed improvements, and the strong cooperation between freight, commuter and intercity rail operators will provide for continued growth and efficient movement of people and goods within the LOSSAN corridor with statewide and even national benefits.

Without the proposed improvements, the corridor's capacity for greater movement will not be meaningful and reductions in travel time will not occur, rail passenger service competitiveness will not increase and reliance on highway travel will increase.

D. RELIABILITY

Beyond travel time, travelers are also sensitive to reliability (i.e. the degree to which they can be certain to arrive at a given time). As discussed above, roadway congestion, and a growing intercity travel market, are adversely impacting the reliability of intercity automobile travel. Based on current performance and forecasted congestion levels, the reliability of highway travel will be severely impacted in future years.

According to the Texas Transportation Institute, there were approximately 811 million annual hours delayed in traffic by those who commuted by automobile in the Los Angeles and San Diego areas in 1999. This is the highest delay experienced by any urban area in the nation. There are many causes of increased highway congestion throughout Southern California. For example, accidents, stranded roadside cars, or a routine traffic violation stop can create a "rubberneck" effect as drivers slow at the scene of the incident, delaying travelers for miles. In addition to typical congestion inducers, poor weather conditions (rain, wind, and fog) also negatively affect the reliability of highway travel times. Rain and wind can make roads dangerously slick, increasing the likelihood of accidents. Often times, fog, haze and glare impairs visibility and requires drivers to slow down.

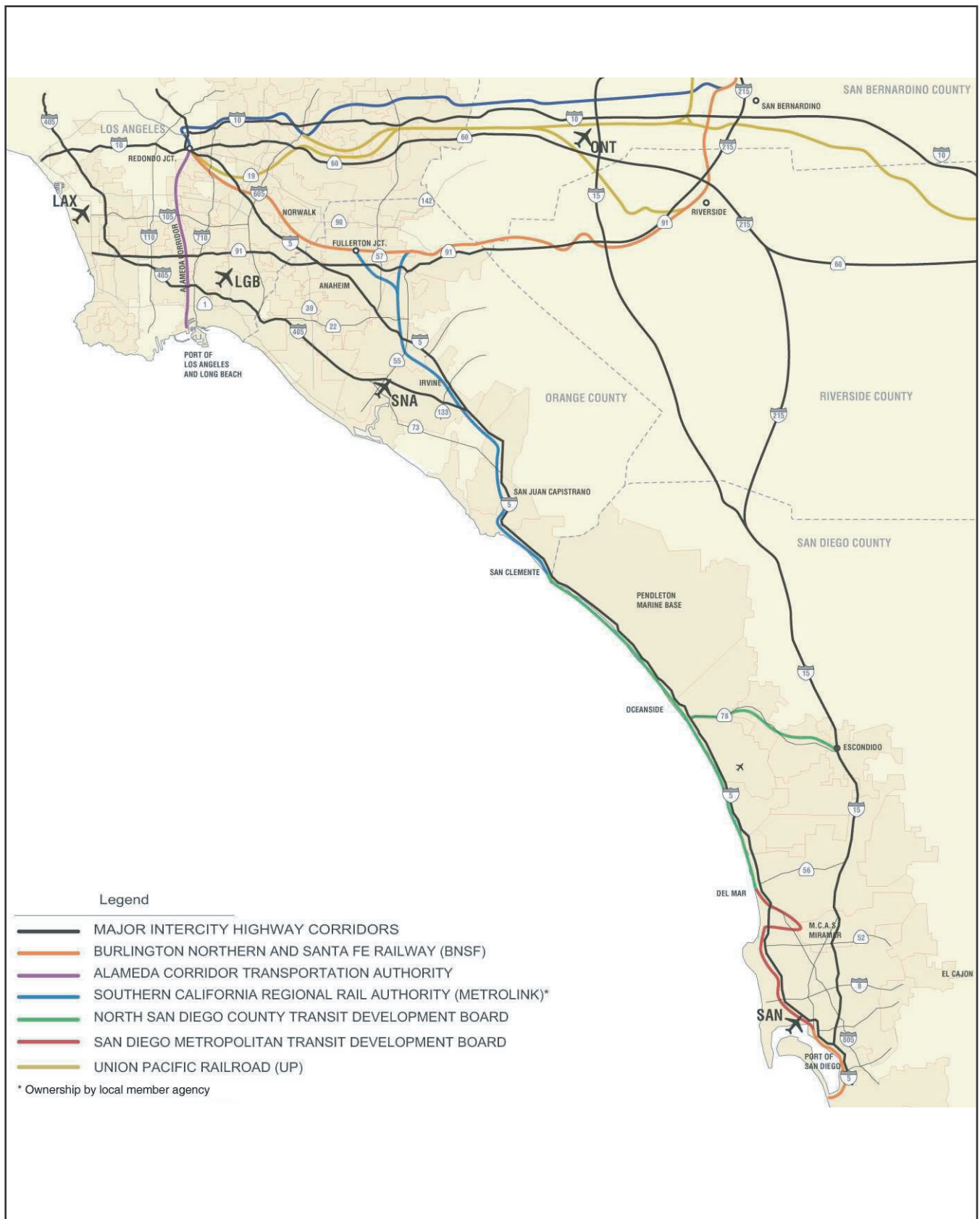


FIGURE 1.2-2

Los Angeles to San Diego Intercity Travel Routes

LOSSAN Rail Corridor Improvements

Program Environmental Impact Report / Environmental Impact Statement



U.S. Department
of Transportation
**Federal
Railroad
Administration**

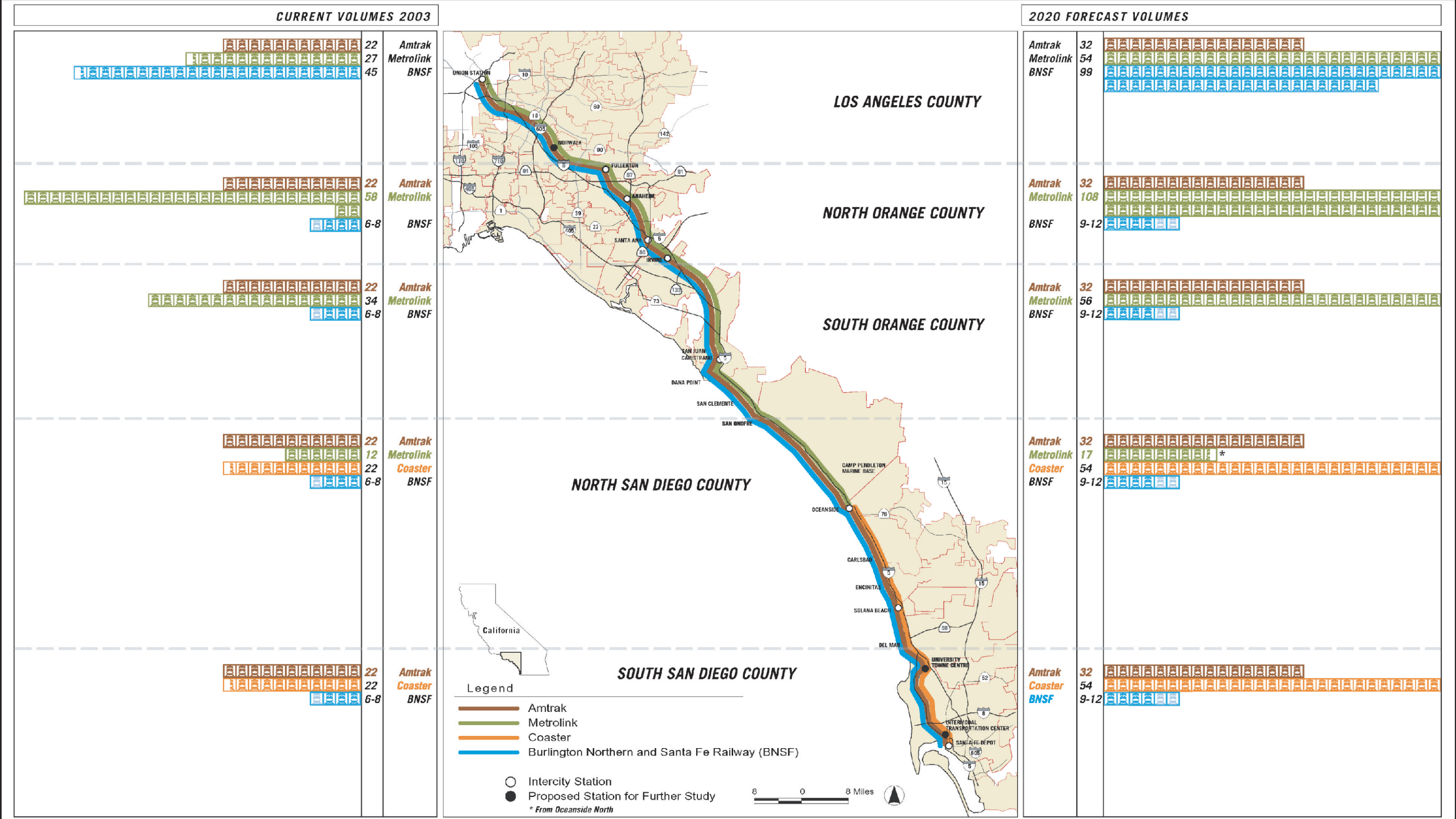


FIGURE 1.2-3

Existing and Future Train Volumes on the LOSSAN Corridor
LOSSAN Rail Corridor Improvements
Program Environmental Impact Report / Environmental Impact Statement

The need to share space with freight and passenger trains, coupled with extensive sections of single-track on the rail corridor, often lead to delays along the rail corridor, since the delay of a single train often has the consequence of affecting other trains operating within the corridor. Double track, as an example, eliminates the delays currently associated with trains waiting at a passing track for others to clear a single tracked-section. Elimination of this type of delay alone would provide for more consistent operating schedule for trains, significantly increasing on-time performance and reliability. Proposed grade separations would also reduce the impacts of inclement weather (such as the coastal fog experienced during much of the year. These grade-separations would increase not only the reliability and operating performance of trains, but also provide for increased traffic flow on local streets that are presently subject to delays when trains are crossing.

On-time performance is also an important factor in attracting travelers. From 1999 to 2001, Amtrak's on-time performance within the LOSSAN corridor improved 6.6 percent, from 71.6 percent to 78.2 percent. This performance increase shows that Amtrak is making gains toward reaching its ultimate goal of a 90-percent on-time performance standard. The proposed rail improvements will improve the on-time performance and reliability of the passenger rail service by facilitating passenger and freight movements, accelerating Amtrak's ability to reach this goal.

E. SAFETY

Safety is an overarching consideration in providing transportation. A key rail safety consideration focuses on reducing or eliminating interactions between people, automobiles and trains. These interactions occur most frequently at grade crossings, and where pedestrians trespass across rail lines to get to their destination.

Projected growth in the movement of people and goods by auto and rail over the next two decades underscores the need for improved safety. With more and more vehicles on the roadways and more frequent and faster trains, the potential for rail/automobile collisions increase.

Passengers must have confidence that the rail service provided is not only reliable and fast, but is also safe or safer than other modes. Nationally, passenger rail travel is one of the safest modes of transportation. Railroad safety in the United States has steadily improved over the past several decades, despite the increase in both highway and rail traffic. The California Department of Highway Safety and Motor Vehicles publishes an annual summary of accident data for state highways. In 1998, there were a total of 3,057 fatalities and 189,007 non-fatal injuries on California highways (California Department of Highway Safety and Motor Vehicles 1998). This corresponds to an estimated injury rate of 100 per 100 million vehicle miles of travel (VMT) or 160 million vehicle kilometers of travel (VKT) per year. These statistics are increasing; in 2000 and 2001, there were 3,753 and 3,956 vehicle deaths in California respectively, according to the National Center for Statistics and Analysis. Nationally, 42,116 persons were killed in auto accidents in 2002, compared with 41,945 in 2001, representing a 0.4% increase. The fatality rate per 100 VMT was 1.52 in 2001, with 1.09 persons injured per 100 VMT. California was one of three states in the United States with the highest number of persons killed in motor vehicle traffic accidents for the years 2000 and 2001 (the other two highest states were Texas and Florida).

In comparison, throughout the State of California in 2002, there were 132 non-passenger railroad fatalities (for combined freight and passenger rail operations). Intercity rail travel in California is provided by Amtrak, which operates along four major corridors in the state, including the Pacific Surfliner (San Luis Obispo to San Diego). Nationally, there were 126 fatalities and 1,484 non-fatal accidents associated with Amtrak operation in 2002. For all rail operations in 2002 (freight and passenger) there were about 13 train accidents per 1 million train miles (1.6 million kilometers) (Federal Railroad Administration, 2004). A variety of factors contribute to rail accidents. For instance, conventional railroad rights-of-way are typically unfenced and at-grade. Drivers and pedestrians may fail to comply with grade crossing warning devices. Approach pavement markings, such as turn arrows and other lane markings, are often worn and difficult to see. Pedestrians and drivers may not expect to encounter a train and may be forced to react quickly because they are “taken by surprise.” In addition, because large objects appear to be moving more slowly than they actually are, pedestrians and drivers may misjudge the speed of trains.

To help ensure that future increases in rail traffic occur without a corresponding increase in hazard, the State of California supports the extensive rail safety information and education program, Operation Lifesaver. Congress has also historically recognized the need to improve rail crossings and has provided funds to accomplish this in the past. The proposed Rail Improvements Alternative will address this need by reducing or eliminating the hazards of highway-rail crossings, as well as provide new or upgraded pedestrian crossings along the corridor.

In addition, the FRA has also developed its own guideline to address safety concerns at grade crossings. This guideline states that “*public and private crossings where train speeds are between 90 and 110 miles per hour (mph) should be equipped with special crossing protection devices, grade separated, or closed*” (reference).

Even though overall accident rates are relatively low for railroads, the LOSSAN corridor traverses several highly traveled roadways and pedestrian areas at-grade, which when coupled with higher levels of rail traffic could lead to higher accident rates, if grade crossings are not eliminated and access issues addressed. Grade-separations for both vehicles and pedestrians will be explored through this Program EIR/EIS.

The safety improvements included in the proposed Rail Improvements Alternative will help in maintaining high overall rail passenger safety within the LOSSAN corridor when compared to other modes of transportation.

F. AIR QUALITY AND PROTECTION OF NATURAL RESOURCES

The Clean Air Act (CAA) makes “transportation conformity” the affirmative responsibility of the U.S. Department of Transportation and regional Metropolitan Planning Organizations (MPOs). Transportation conformity addresses air quality attainment and maintenance strategies contained in the State Implementation Plan (SIP), used to evaluate transportation alternatives, including the no project/no action alternative.

Figure 1.2-4 shows the counties in California designated as “Ozone Non-Attainment Areas” (California Air Resources Board 2001). All of Southern California is so designated. Maintaining and improving air quality is one goal of the State Transportation Improvement Program (STIP) and Regional Transportation Plans (RTPs). The challenges for metropolitan areas are to continue to reduce vehicle emissions to acceptable levels and maintain air quality standards by encouraging more efficient use of land resources, improving mobility, and providing alternative transportation facilities and services. Approaches aimed at reducing the demand for trips in single-occupant vehicles must be integral to all transportation plans and programs to ensure that these areas conform to federal air quality standards. Developing multipurpose corridors that combine designated lanes for high-occupancy vehicles, transit, and rail alternatives is a statewide transportation strategy for meeting air quality objectives. The proposed LOSSAN rail improvements would help implement this strategy.

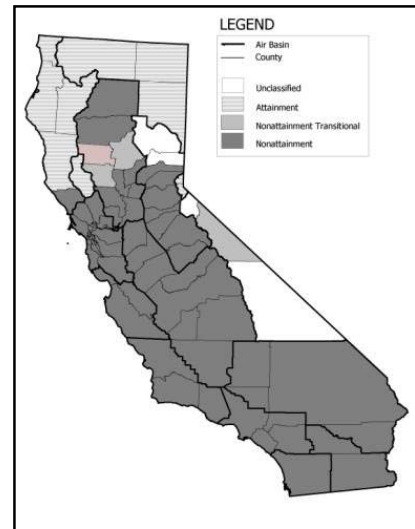


Figure 1.2-4
2001 State Area Designation -
Ozone

Meeting federal and state air quality standards over the next 20 to 40 years will also require reductions in the total distance traveled by vehicles, integration of land use and transportation planning and development, development of transportation demand strategies, implementation of operational improvements, and use of new technologies that improve transportation efficiencies and provide a transportation alternative to the single-occupant automobile.

Moving passengers by rail produces significantly less pollution per passenger mile traveled as compared to typical automobile use, and would aid in reducing emissions throughout the corridor. The extent to which the objective of improving air quality can be met by an increased use of the intercity rail system is explored in this Program EIR/EIS.

The protection of important coastal environmental resources, such as the lagoons and coastal bluffs, will also be a consideration of any improvements to the segments of the LOSSAN corridor as it traverses the coastline. The improvements considered in this Program EIR/EIS would dovetail with other efforts to restore sensitive environmental habitat, as well as provide new funding opportunities to mitigate and reduce the impacts of rail service. Where practicable, improvements to the conditions of sensitive environmental habitat would be made, such as increasing the opportunity for tidal flows in the lagoons as part of improvements to lagoon crossings. Identification of additional improvements to habitat conditions is also explored in this report.